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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/580,683

05/30/2000

Hoon Chang

678-498

1775

7590

03/23/2004

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EXAMINER

NGUYEN, STEVEN H D

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 03/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/580,683

Applicant(s)

CHANG ET AL.

Examiner

Steven HD Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1-2, 4-6 and 9 are rejected under 35 U.S.C. 102(a) as being anticipated by Agarwal (WO 99/04521).

Agarwal discloses (Figs 1-13 and Pages 1-61) a system and method for transmitting data in a mobile communication system comprising the steps of segmenting a data stream into at least one consecutive frame having a variable data length, the data stream being segmented into a plurality of consecutive blocks having a variable data length which is a size is smaller than a predetermined size, each said consecutive block being segmented into a plurality of sub-consecutive blocks having a byte length (Page 26, lines 8-23 discloses a data stream is divided into the variable sized packets which is divided into the smaller packets); attaching, at each head of the consecutive frames, a header including a first set of bits indicating the sequence number of a consecutive block corresponding to the head and a second set of bits indicating the sequence number of a sub-consecutive block corresponding to the head and an indicator for indicating the last sub-block; and transmitting the header-attached consecutive frames (Page 26, lines 24 to page 27, lines 21; See Fig 7b, L is last sub-block, Packet sequence number, sub-block sequence number SARid, Fig 13, Packet # is packet sequence number and seq # is sub-block sequence number).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmadvand (USP 6542490) in view of Long (USP 5805822) and Cheng (USP 6226301).

Regarding claims 1-6 and 8-9, Ahmadvand discloses (Figs 1-5 and col. 1, lines 5 to col. 9, lines 10) a system and method for transmitting data in a mobile communication system comprising the steps of segmenting a data stream into at least one consecutive frame having a variable data length, the data stream being segmented into a plurality of consecutive blocks having a variable data length which is a size is smaller than a predetermined size (Fig 3, Ref 32 segments the IP packets into variable length of LAC frames which includes a sequence number, then encapsulated them into RLP frames for transmitting via wireless channels). However,

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Ahmadvand fails to disclose each said consecutive block being segmented into a plurality of sub-consecutive blocks having a byte length attaching, at each head of the consecutive frames, a header including a first set of bits indicating the sequence number of a consecutive block corresponding to the head and a second set of bits indicating the sequence number of a sub-consecutive block corresponding to the head and an indicator for indicating the last sub-block; and transmitting the header-attached consecutive frames. In the same field of endeavor, Long discloses (Figs 1-9 and col. 1, lines 15 to col. 14, lines 67) each said consecutive block being segmented into a plurality of sub-consecutive blocks having a byte length attaching, at each head of the consecutive frames, a header including a first set of bits indicating the sequence number of a consecutive block corresponding to the head and a second set of bits indicating the sequence number of a sub-consecutive block corresponding to the head and an indicator for indicating the last sub-block (Fig 2, a method of segmenting data stream into the block and then segment them sub-block and attach a header having segment number, 30, and sub segment number 32, and an indicator for indicating the last sub-block, Ref 34; See col. 12, lines 4-45 and col. 6, lines 15 to col. 7, lines 50) and a method and system for segmenting the size of the block according to the requested size (Col.1, lines 1-21). However, Ahmadvand and Long fails to disclose the RLP frame that includes a sequence number in the header. In the same field of endeavor, Cheng disclose a method and apparatus for segmentation and reassembly the data stream into RLP frame having sequence number (Fig 3-5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method and apparatus for segmenting the data stream into the block then sub segment the blocks into the sub block and attaching a header with the sequence

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numbers as disclosed by Long and RLP frame with sequence number as disclosed Cheng into Ahmadvand's system. The motivation would have been to prevent the loss of transmitting data.

Regarding claim 7, Ahmadvand, Long and Cheng do not disclose a forward resequencing for storing the transmitted frame in order to retransmit the transmitted frame. However, the examiner takes an official notice that a method and apparatus for shorting the packet according to the sequence number is well known and expected in the art at the time invention was made into the system of Ahmadvand, Long and Cheng. The motivation would have been to reduce the delay time in searching for the retransmitting packet in the buffer.

5. Claims 3 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agarwal as applied to claims 1 and 5 above, and further in view of Barrett (USP 5546549).

Regarding claims 3 and 8, Agarwal fails to disclose the size of each consecutive block included in each consecutive frame is determined to a requested size. However, Barret discloses a method and system for segmenting the size of the block according to the requested size (Col.12, lines 5-36).

Since, Agarwal suggests the use of transmitting the data stream according to the bandwidth on the demand. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method of segmenting the data stream into the blocks according the requested size as disclosed by Barret's system. The motivation would have been to prevent the loss of transmitting data.

Regarding claim 7, Agarwal does not disclose a forward resequencing for storing the transmitted frame in order to retransmit the transmitted frame. However, the examiner takes an official notice that a method and apparatus for shorting the packet according to the sequence

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number is well known and expected in the art at the time invention was made into Agarwal's system. The motivation would have been to reduce the delay time in searching for the retransmitting packet in the buffer.

Response to Arguments

6. Applicant's arguments filed 1/7/04 have been fully considered but they are not persuasive.

In response to page 2, the applicant states that Agarwal does not disclose a data stream being segmented into a plurality of consecutive blocks having a variable data length wherein each consecutive block being segmented into a plurality of sub-consecutive blocks having a byte length. In reply, Agarwal discloses a device which receives data stream containing a plurality of variable sized packets, segments the data stream into a plurality of blocks having variable data length "reads on packet of data stream having a variable sized packet"; then the variable sized packet is segmented by into a plurality of ATM cells wherein each ATM cell includes 53 bytes (See Fig 7-9 wherein the ATM cell has the byte length).

In response to pages 3, the applicant states that Ahmadvand, Long and Chen do not disclose at least one consecutive frame having a variable data length, the data stream being segmented into a plurality of consecutive blocks having a variable data length wherein each consecutive block being segmented into a plurality of sub-consecutive blocks having a byte length. In reply, Ahmadvand discloses a device which received a data stream of plurality of packets, segments the data streams into a plurality of data packets "block having variable data length; then segmenting each block into a plurality of sub blocks (See col. 7, lines 10 to col. 8,

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lines 14; the sequence frame 74 has a variable length “ read on a frame having a variable length). Long discloses a block is segmented into the sub-block having byte length (See col. 12, lines 4-45 and col. 6, lines 15 to col. 7, lines 50).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven HD Nguyen whose telephone number is (703) 308-8848. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on (703) 308-6602. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

A handwritten signature in black ink, appearing to be 'Steven HD Nguyen', written in a cursive, stylized manner.

Steven HD Nguyen
Primary Examiner
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3/18/04